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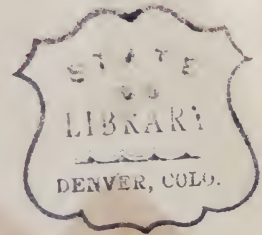






KNOW HOW

KNOW WHERE



AN

ANALYSIS

OF

# INDUSTRIAL COLORADO

AND ITS

POTENTIAL FOR

INDUSTRIAL

DEVELOPMENT

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# AN ANALYSIS OF

## INDUSTRIAL POSSIBILITIES

### IN COLORADO

#### GENERAL DEFINITION

Colorado is the geographical link that binds the East to the West ... the focal area of the rapidly-changing economic pattern of the United States that began taking form during World War II and has continued to accelerate.

Geographically, Colorado sweeps from the western edge of the Great Plains, across the Continental Divide of the Rocky Mountains and into the Western Slope toward the Pacific Ocean. It lies midway between the Canadian border and the southern border of the United States. Seventh largest state of the Union, Colorado's total area comprises 66,718,080 acres or 104,247 square miles. Its extreme length--east to west--is 387 miles; its extreme width--north to south--is 276 miles.

The magnificent Rocky Mountains, running through the west-central portion of the state, from north to south, provide one of the world's great year-around recreation attractions. In this Continental Divide are 52 of the nation's highest peaks, all of them with summit elevations of 14,000 feet or more.

The eastern half of the state is characterized by rolling and productive plains, broad farm lands--much of them under irrigation. Colorado's Western Slope extends through heavily-timbered slopes, rich mineral areas and across impressive and fertile plateaus, valleys and mesas. From the Rockies, wide rivers flow through the state, both to the east and to the west, numbering among them some of America's most famous streams.



## CLIMATE PERFECTION

The high, dry, sunny climate of Colorado is certainly one of the state's outstanding assets. It is an ever-prevalent factor--at work or at play.

Altitudes in Colorado range from 3,385 to 14,431 feet above sea level. The mean elevation of 6,800 feet makes it the highest state in the Union--the "Top of the Nation".

The mountain air, dry and invigorating, fills one with a zest for any task or recreation. There are no collar-wilting, energy-sapping heat waves--no depressing cloudy spells. Snowstorms that block transportation for as long as one day are a once-in-a-decade phenomenon.

Summer weather is delightful, calling for covers at night .... winters are mild and open, with abundant sunshine. In fact, days without sunshine in Colorado are a rare occurrence, indeed, for the sun shines on an average of 3,333 hours a year. Insect pests are few, and at higher elevations there is complete freedom from pollen-borne hay fever.

Annual average precipitation is 15.2 inches. Humidity, averaging 33 per cent, is lower than in any other area in the nation with the exception of a few points which are in completely arid plains or desert country.

### COLORADO WEATHER

(Long-Time Averages of All Colorado Weather Stations)

Month	Average Daily Temperature Chart			Average Sunshiny Days	Average Precipi- tation	Average Humidity 11:30 A. M.
	Max.	Min.	Av.			
January	42.8	18.5	30.7	25	.75	.42
February	44.7	21.0	32.8	21	.85	.40
March	51.3	27.2	39.3	24	1.15	.35
April	59.8	35.6	47.7	23	1.61	.32
May	68.9	44.5	56.7	25	1.76	.30
June	80.2	53.5	66.8	26	1.46	.26
July	85.7	59.5	72.6	27	1.90	.27
August	84.3	58.3	71.3	26	1.77	.29
September	76.5	49.3	62.9	25	1.29	.29
October	64.6	38.4	51.5	26	1.12	.31
November	52.6	27.8	40.3	23	.76	.35
December	<u>44.5</u>	<u>20.5</u>	<u>32.5</u>	<u>25</u>	<u>.78</u>	<u>.42</u>
Yearly Averages and Totals	63.0	37.9	50.4	296	15.20	.33



## POPULATION

A little over a decade ago, one out of every ten Americans made his home in the eleven Western States. Current population estimates reveal that nearly one out of every seven now lives in this area.

This is part of the population story that not only shows a rapid shifting in the consumers' market, but strikingly indicates a growing labor and service pool in this western area. While heaviest numerical increases during the 1940-1954 period developed in the three Pacific Coast States, every state in this group (except Montana and Idaho which are mainly agricultural) is well ahead of the average national population increase.

Since the 1940 census, the Western States have increased 62.0 per cent in population compared to the national 22.4 per cent growth. Population gain for this area was 8,609,735 which accounted for nearly 30 per cent of the total national increase.

The 1954 estimated census gives Colorado a population of 1,456,000--an increase of 332,704 persons, or 29.6 per cent, over the total count of 1,123,296 in 1940. This increase in population was marked by phenomenal growth in metropolitan areas. Greatest numerical increase was recorded by the City and County of Denver. From 1940 to 1954, Denver's population increased by 162,588 persons, or 50 per cent. The estimated population figure for 1954 was 485,000 as compared to 322,412 in 1940. Population of the four-county Denver metropolitan area was estimated in 1954 to be 648,000, as compared to 407,768 in 1940.

Other concentrations of population are found in El Paso County, of which Colorado Springs is county seat, and around Pueblo, seat of Pueblo County. Latest official population figures for these two areas show El Paso County with a population of 74,523, an increase of 37.9 per cent over a ten-year period; Pueblo County with 90,188 persons shows a 31 per cent population gain during the same period. Minor decreases in some rural areas are accounted for by increased size of farms and increased farm mechanization.

Colorado's net population gain of nearly 30 per cent in the past 14 years puts it in the upper third among the 48 states insofar as percentage-wise increase is concerned.

The following table shows 1950 and 1954 population statistics for the eleven Western States with a comparison to national figures:

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State	Population	1954 Estimated Population	Gain	Per Cent Gain	Per Cent of Total U.S. Population	
					1950	1954
Arizona	749,587	993,000	243,413	32.5	.50	.62
California	10,586,223	12,554,000	1,967,777	18.6	7.02	7.79
Colorado	1,325,089	1,456,000	130,911	9.9	.88	.90
Idaho	588,637	615,000	26,363	4.5	.39	.38
Montana	591,024	628,000	36,976	6.3	.39	.39
Nevada	160,083	218,000	57,917	36.2	.11	.14
New Mexico	681,187	781,000	99,813	14.7	.45	.48
Oregon	1,521,341	1,639,000	117,659	7.7	1.01	1.02
Utah	688,862	757,000	68,138	9.9	.46	.47
Washington	2,378,963	2,540,000	161,037	6.8	1.58	1.58
Wyoming	290,529	312,000	21,471	7.4	.19	.19
Totals	19,561,525	22,493,000	2,931,475	15.0	12.98	13.95
U.S.	150,697,361	161,195,000	10,497,639	7.0	100.00	100.00

As is shown in the table, the eleven Western States represent 13.95 per cent of the total U.S. population. The gain in this area represents 28 per cent of the total U.S. gain during the 1950-54 period.



## GROWTH OF INDUSTRIAL COLORADO

Mining was Colorado's first industry. Discovery of gold in Clear Creek Canyon in 1859 was the magnet which first attracted population to Colorado. To serve this industry and its people with food, supplies, machinery--agriculture and manufacturing emerged. Even at that early date, Colorado's importance as a natural distribution and supply center was established, and it was largely this geographical factor that pushed Denver to major status in the marketing area embracing the Western States.

Colorado continues to maintain a balanced economy. Metal mining no longer is the state's major industry. Exploitation of coal, non-metallic minerals and petroleum deposits, however, maintain the commonwealth's extractive industry income on a high level.

Development of more rapid transportation and communication with the markets of America brought agriculture quickly to the fore as the backbone of the state's economy. In more recent years, Colorado's livestock industry has enjoyed phenomenal growth, and Colorado-raised-and-fattened livestock not only is among the nation's best but is being placed on broader markets and in greater quantity than ever before.

With World War II, the industrial importance of Colorado was given a major and continuing impetus. Prior to 1941, the state had shown a steady increase in the number and size of manufacturing and processing factories and plants. Physically, Colorado's industry was equipped to assume a major role in conversion and production for war needs. A deeper labor pool was created.

Industry, for competitive reasons, voluntarily began decentralizing its production and distribution facilities. More recently, governmental requests for decentralization and the added incentive of greater physical security in this atomic age have accelerated this program.

Since the end of World War II, some 300 new industrial and processing firms have entered active production in Colorado. These firms range in size to employee staffs of 300. One survey disclosed migration of complete operations of some firms, establishment of branch or distribution facilities of others. Many of the new firms represent outside capital and personnel.

Colorado's industrial growth is reflected in the table on following page:

<u>Year</u>	<u>Number of Estab- lish- ments</u>	<u>Aver. No. of Em- ployees</u> <sup>1/</sup>	<u>Wages and Salaries</u> <sup>1/</sup>	<u>Value Added by Manufacture</u> <sup>1/</sup>	<u>Gross Sales of Manufacturers, Traders &amp; Jobbers</u> <sup>3/</sup>
1939	1, 219	32, 234	\$ 43, 953, 000	\$ 90, 330, 000	
1947	1, 602	54, 071	144, 207, 000	286, 626, 000	\$335, 195, 000
1948	1, 609*	53, 992*	152, 659, 000*	298, 804, 000*	434, 208, 000
1949	1, 615*	50, 593	145, 365, 000*	278, 626, 000	468, 316, 000
1950	1, 640*	56, 508	163, 310, 000	340, 795, 000	403, 903, 000
1951	1, 684*	58, 195	195, 694, 000	393, 899, 000	555, 663, 000
1952	1, 738	59, 390	213, 998, 000	397, 464, 000	583, 969, 000
1953	1, 778	60, 670*	234, 412, 000*	417, 005, 000*	612, 679, 000
1954	1, 791	57, 110*	228, 008, 000*	418, 500, 000*	657, 000, 000

\*Estimated by the Bureau of Business Research, University of Colorado

Sources:<sup>1/</sup>U.S. Bureau of the Census, Census of Manufacturers, and  
Annual Survey of Manufacturing.

<sup>3/</sup>Colorado State Department of Revenue, Sales Tax Division,  
data for fiscal years, ended June 30.

## MARKETS

In analyzing Colorado's position in regard to economical distribution, market development and expansion, one inescapable fact must be kept constantly in mind: The Nation's markets are moving West.

Estimated 1954 figures of the U.S. Bureau of the Census show that the 11 Western States--of which Colorado is the eastern-most--had a numerical gain of 8,609,735 over the 1940 population for this area. This accounts for 29.2 per cent of the entire population gain of the United States, and is at a rate of 62.0 per cent as against the national gain for the period of 22.4 per cent.

Colorado not only serves this 11-state western area, but is a market, manufacturing and distribution factor through the Southwestern States and the Midwest. Many sharply competitive products, manufactured in Colorado, are successfully sold in increasing quantity throughout the United States and on the world markets.

Thus Colorado's markets--both primary and extended--are expanding both as to area and in volume and nature of goods shipped. The clear logic of industrial decentralization has contributed to this expanding Colorado economy. Population shifts have hastened the process. The gaining importance of the Pacific Coast States in world commerce is a further factor.

Markets served from Colorado are divided into four areas:

- 1--The immediate market including Colorado, all of New Mexico, Wyoming and Montana; the Black Hills region of South Dakota, western Nebraska and that part of Utah contiguous to the Green and Colorado Rivers drainage area.
- 2--The extended, or secondary, market embracing the Mountain States of Arizona, Idaho and Nevada, and the Plains States of Kansas, Oklahoma and Texas.
- 3--National markets, served by the growing number of Colorado firms producing both consumers and hard goods.
- 4--World markets. In point of fact, Colorado is one of the world's prime sources for mining machinery and mine equipment. Additional products--notably rubber and industrial porcelains and ceramics--are finding world markets.

An analysis of the immediate market area provides a measurement of marked gain in individual purchasing power, both dollar-wise

and compared with national purchasing power increase. Using the inflation year of 1929 as a base, comparative figures follow:

	Per Capita Income 1929	Per Capita Income 1953	Per Cent Increase
United States	\$ 680	\$1709	151
Rocky Mountain States	569	1616	184
Colorado	616	1675	172

A new geographic advantage for manufacturing and distributing firms in Colorado is becoming increasingly evident. Not only is Colorado centrally located with respect to trade in the Rocky Mountain Region, it is centrally located between the two great areas of population concentration in America--the East and Midwest on one side and the Pacific Coast on the other.

Colorado and her sister states in the Mountain and Midwest regions constitute, in a sense, the last frontier, economically speaking. This region is now in the midst of a continuing population and industrial expansion. As it grows, those firms located in Colorado have an unparalleled opportunity to grow with it.



## LABOR

Colorado, with an abundance of natural resources, a healthy climate, recreational advantages and a strategic location, also has a solid core in its human resources--its labor supply. Any employer with a long-range view wants to look closely at the human resources in any community where he may locate. Colorado invites intense scrutiny of its human resources--they will not be found wanting.

Because of seasonal factors--especially in mining, lumbering and agriculture--both the total number employed and the total labor supply fluctuate, the total labor force ranging between 575,000 and 606,500 persons annually. In July 1954, a high month, 588,000 persons were employed, and 18,500 persons--only 3.1% of the total labor force--were unemployed. Many of those were simply between jobs and were not out of work for long periods of time.

The minimum labor force of 575,000 persons, according to recent estimates, shows 419,750 men and 155,250 women. An impressive portion of this employed labor force is engaged in occupational fields requiring experience and training above the laborer classification. This fact is borne out by the following table which was taken from Business Census figures of 1948 (latest year in which a complete study was made). The table shows percentage of distribution by major occupational groups of employed workers, 14 years old and over, as follows:

<u>Major Occupational Group</u>	<u>Percentage Figure</u>
All Employed .....	100.0%
Professional, Technical and Kindred .....	10.2
Farmers and Farm Managers .....	8.6
Managers, Officials and Proprietors (except farm) .....	10.1
Clerical and Kindred Workers .....	12.4
Sales Workers .....	7.4
Craftsmen, Foremen and Kindred Help .....	13.1
Operatives and Kindred Workers .....	13.2
Private Household Workers .....	1.8
Service Workers (except Private Domestic) .....	8.8
Farm Laborers and Foremen .....	6.0
Laborers (except Farm and Mine) .....	6.2
Occupation not Reported .....	2.2

(Changing conditions, because of defense program, may cause slight variance in percentage.)

It is notable that the educational standards of Colorado's labor force are higher than the national average, making for a working force with above average educational background and thereby having the ability to learn new skills faster. The percentage of school attendance for persons 5 to 24 years of age in Colorado is 60.4 compared with 57.7 for the nation as a whole.

Colorado's labor legislation closely parallels similar federal regulations and laws in other states. Employers and employees in Colorado are protected by legislation affecting relations concerning the health, safety, workmen's compensation, minimum wages and working hours. Most of the state's labor legislation is administered by the Colorado Industrial Commission, created in 1915.

Through the years, Colorado has achieved an outstanding record of labor harmony. Excellent relations between management and labor have been the rule rather than the exception in Colorado. Work stoppages and lockouts have been fewer in number than in other states, and many of those which did occur were so-called "industry-wide" strikes affecting the same industry throughout many states.

During a two-year period from July 1946 to July 1948--a period marked by many labor disputes on the national scene--some 545 notices of intent to alter wages, hours of work or other working conditions were filed either by employers or unions with the State Industrial Commission. Over 80% of these cases were settled by mutual agreement. A random selection of 364 of the 545 cases indicates an intent to strike or to lockout was contained in only 33 of the notices--less than 10%. In only 11 of the 33 instances did a strike or lockout actually occur.

Colorado has another prime ingredient to add to its labor picture, one of the most vital factors of all--labor productivity. Latest published data prove that Colorado labor, man for man, is substantially more productive than the national average.

A large firm engaged in making transportation equipment parts found that their plant employees in Colorado were more stable, more interested in their work and had a higher efficiency rating in comparison to employees in the firm's Chicago plant. A large Denver manufacturing firm has a branch plant, similar to its Denver home plant, located in Detroit. Worker productivity, it was found, was decidedly greater in Denver than in Detroit. Many other instances of similar comparisons exist. Reasons for this greater productivity of Colorado workers include year-round temperate climate without extremes of heat or cold, less illness, the recreational advantages offered by Colorado's mountain playgrounds, the large percentage of home ownership. These and many more factors make Colorado labor a major asset in the consideration of location of industry.



## WATER RESOURCES

The Rocky Mountains--America's great watershed--have endowed Colorado with the liquid wealth essential to support industry, agriculture and large population. Six of the nation's major rivers have their headwaters within the commonwealth. These are the Rio Grande, Colorado, Arkansas, South Platte, North Platte and Republican Rivers. These rivers and their tributaries, important to Colorado as it exists, are even more vital in the dispersion both of industry and population which will continue in the adult life of the United States.

Colorado possesses 75 per cent of the area 10,000 feet or more in elevation in the United States. Areas above 9,000 feet are those most productive of surface water runoff in the spring and summer months. As a result, Colorado's mountain regions are the source of 99,000,000 acre feet of water annually in normal years. Much of this is utilized in other states as well as in Colorado.

A long-range water conservation program--vital to Colorado and at least five other western states--has been implemented in this state. This program has three objectives: To divert surplus water on Colorado's Western Slope to metropolitan and agricultural areas on the Eastern Slope; to secure water for hydroelectric power generation; to increase storage capacity.

Thirty-seven per cent of Colorado's area is west of the Continental Divide, with 69 per cent of the water surface yield in this area. The Eastern Slope shows 31 per cent of the surface water yield and 63 per cent of the land area.

Current and growing water needs of eastern Colorado were satisfied through boring of water diversion tunnels under the Continental Divide, diverting surplus Western Slope water into the headwaters of Eastern Slope streams. The pioneer bore of the Denver & Rio Grande Western Railroad Moffat Tunnel (separate from the railroad bore) was utilized to bring more water to Denver's mains in 1936.

The Colorado-Big Thompson project, completed in 1954, provides supplemental water for irrigation of some 615,000 acres in fertile northeastern Colorado. Water from this project also will be made available for municipal water supplies and hydroelectric power generation. This is the largest of nearly a dozen major completed water projects in the state. A partial list of these projects includes--besides the Colorado-Big Thompson--the Uncompahgre, Grand Valley, Pine River Extension, Mancos, San Luis (Conejos Unit), Cherry Creek and Colorado Springs Flood Control. Several more have been authorized, and an additional number of projects are being studied.

Conservation and development of Colorado's water resources continues with sound planning for industry, agriculture, power and urban use. Full assistance is given existing and potential industry in analysis of water properties, sanitary engineering and proper utilization of the state's abundant water resources.

## ELECTRIC POWER

Colorado possesses the abundance of resources essential to adequate production of electric power. These include hydroelectric potential in connection with multiple purpose water development projects and the more important thermal energy reserves. Here are located vast deposits of coal, great underground reservoirs of oil and natural gas, mountains of oil shale and perhaps more important than all of these are the deposits of uranium ores. The potential thermal power resources of this area stagger the imagination.

Electric power in Colorado is generated and/or sold by 55 separate agencies. Of these 55 firms, 16 are private utility companies, 20 are municipal power operations, 17 are Rural Electrification Association cooperatives and 2 are federal agencies.

Following is a summary of Colorado electric generating data:

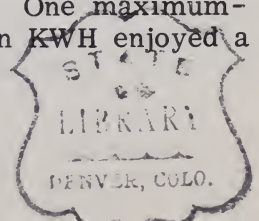
Type of Agency	Steam KW	Hydro KW	Diesel KW	Total KW
Private Utilities	508,963	56,367	2,250	567,580
Municipalities	81,000	9,210	17,295	107,505
R E A Cooperatives	5,250	150	4,390	9,790
Bureau of Reclamation	-	178,700	-	178,700
Rocky Mountain Arsenal	7,500	-	-	7,500
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Totals	602,713	244,427	23,935	871,075

Improvements and new construction will increase the state's generating capacity to 1,000,000 KW by the end of 1955. Colorado's great reserves of coal and the ready availability of natural gas make inexpensive steam-generated electric power possible in abundant quantities. Steam generating capacity will be closely coordinated with the development of an additional hydroelectric potential of 600,000 KW as demands require.

Production of electric energy in Colorado in 1953 amounted to 2,732,000,000 kilowatt hours as compared with 1,628,212 kilowatt hours in 1949, an increase of 67% in five years.

The average rate for all commercial and industrial users of electric power in Colorado amounts to 1.866¢ per KWH. One maximum-quantity user who consumed approximately 114 million KWH enjoyed a rate of 6.96 mills.

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## NATURAL GAS

Colorado currently consumes in excess of 100 billion cubic feet of natural gas annually. The state's ten natural gas fields produce somewhat more than sixteen billion cubic feet of this needed supply. The balance is supplied through pipelines from natural-gas-producing areas in adjacent states.

The Colorado supply for use in the Columbine State is expected to be increased substantially as soon as a natural gas pipeline in north-eastern Colorado is completed. This line will provide natural gas service to Fort Morgan and Brush; also will provide a link between the gas fields of northeastern Colorado with Denver, marking the first time in history that Denver will be able to utilize natural gas from within the state's boundaries.

Establishment of the proposed line, now awaiting Colorado Public Utilities Commission approval, is expected to spark added development of and exploration for natural gas reserves in northeastern Colorado. In the past, there was no market outlet for the gas production, but the proposed pipeline will put a new impetus on natural gas exploration.

Key industrial areas on Colorado's Eastern Slope draw their major natural gas supply from the Amarillo, Texas, field via a 336-mile pipeline operated by Colorado Interstate Gas Company. The company also operates two other pipelines which bring gas to eastern Colorado. One of these lines from the Fourway area in the Texas Panhandle Field covers 215 miles to Kit Carson, eastern Colorado, and another 95-mile line from the Lakin, Kansas, gas field to Kit Carson. From Kit Carson to Denver, the company operates 135 miles of 20-inch dual pipelines.

A connection with Interstate's line in Denver, operated by the Colorado-Wyoming Pipeline Company, serves Boulder, Fort Collins and Greeley in northern Colorado and also extends north to Cheyenne, Wyoming.

Durango, hub of the rich San Juan Basin in southwestern Colorado, is served by a pipeline from New Mexico. Lamar, Holly, Springfield and other cities in the agriculturally-rich and food-processing center of southeastern Colorado are supplied by the Kansas-Colorado Utilities Company from the Hugoton, Kansas, gas field. This field also serves communities of the upper Arkansas River Valley as far as Lamar.

In 1955, work will start on another natural gas line which will mean much to the future of Colorado. The Pacific Northwest Pipeline Corporation will begin construction of its line from the San Juan Basin through western Colorado and as far north as Rock Springs, Wyoming,

where Colorado Interstate will build a line across southern Wyoming and down into Denver. This 365-mile line should occasion much development in southern Wyoming of natural gas reserves just as the Pacific Northwest line is expected to stimulate natural gas reserves development on the Western Slope of Colorado.

Fifty-two per cent of all natural gas consumed in Colorado is by industrial users. The balance is consumed by domestic and commercial customers. In 1953, approximately 110 billion cubic feet of gas were used in Colorado and the use is constantly increasing.

Because of the accessibility of natural gas in nearby states, Colorado today enjoys rates which rank with the very lowest in the nation. The average rate for natural gas for all industrial users is 14.69¢ per MCF. One maximum-quantity user enjoyed a rate of 12.87¢.



## MINING

Though mining of precious metals has declined since the turn of the century, Colorado's over-all mineral industry picture is healthy, showing for the ninth consecutive year, an increase in dollar value in 1954. Petroleum, and new strategic metals such as molybdenum, vanadium and uranium, plus industrial minerals, have filled the gap left by decline in precious metal production. In 1946, for example, petroleum output represented 20 per cent of total Colorado mineral output. The 1954 petroleum figures accounted for 44 per cent of the mineral production.

Coal, of which Colorado has the largest reserves, offers a tremendous potential for future chemical industrial development. Hydrogenation, the processing of coal for the production of gasoline and fuel oils, as well as the extraction of hundreds of other by-products, would be extremely important in the event of war and the limitation of foreign supplies. This factor or the reduction of present processing costs may well place the importance of hydrogenation plants in Colorado and other Western States on a par with oil shale processing.

The value of all products of Colorado's extractive industries--metals, industrial minerals, petroleum and coal--currently averages nearly \$300 million annually. Increased production of petroleum, molybdenum, uranium, vanadium, fluorspar, tungsten, clay, and sand and gravel, coupled with price increases for some of the minerals, raised the total value to a new record high of \$296,000,000 in 1954, according to preliminary estimates. Of this total, coal accounted for \$15 million; metals, \$74 million; industrial minerals, \$26 million, and petroleum, \$131 million. Because of security regulations, separate figures cannot be published for some metals, including uranium. These are designated as "undistributed minerals" and account for an estimated \$50 million. Percentagewise, the ranking is coal, 5%; metals, 25%; industrial minerals, 9%; petroleum products, 44%; undistributed, 17%.



## NON-FERROUS METALS

It is common knowledge that the non-ferrous metals, generally, have been in short production and demand during recent years. Pegging the price of gold, for instance, at \$35 per ounce, has made many gold operations unprofitable. Colorado currently ranks second in gold production among the states, first in molybdenum, first in uranium and vanadium, and first in radium. In addition, the state is a major producer of silver, lead, zinc and several lesser metals. The downward trend in metal prices, however, and the continued high cost of labor, supplies and equipment, have caused decreased activity in mining these metals.

Since 1949, uranium has become one of the most important minerals produced in the state, and activity in uranium exploration, development, and mining and milling continued unabated throughout 1954. The Atomic Energy Commission extended the expiration date of the guaranteed minimum price schedule for uranium ores of the Colorado Plateau area to cover the period through March 31, 1962, and also extended through February 28, 1957 the period during which a bonus will be paid for initial and certain other production of uranium ores from domestic mines. This means unquestionably that activity in this field will continue at a high level. Colorado has the largest uranium and vanadium deposits in the nation. Regulations prohibit publishing figures on uranium production.

With the continued world-wide defense emergency, two significant facts bear on the resurgence of the mining industry in Colorado:

- 1--Increased demand for the non-ferrous metals beyond normal domestic needs.
- 2--Increased demand for uranium for atomic usage.

These factors are intensifying both the active mining and processing of ores and essential exploration and development work to assure continued supply.





## NON-METALLIC MINERALS

Nature has been prodigal in her bestowal of the non-metallic minerals within the borders of Colorado. Constantly increasing demand and broadening markets within this field have materially increased Colorado's production since 1946, and in 1953, the non-metallics represented 7.5 per cent of Colorado's total mineral output.

The more important industrial minerals found in quantity in the state include clay, fluorspar, feldspar, perlite, gypsum, limestone, dolomite, cement rock, travertine, crush stone, sand and gravel, mica and dimension stone.

Fluorspar, used for acid making, ceramics and metallurgical purposes, was produced at an annual rate of 65,000 tons during World War II and current output is something around 50,000 tons annually. There was decided increase in fluorspar production during 1953 in the three principal counties--Jackson, Chaffee and Boulder-- with a recorded gain of 83 per cent over 1952.

Clay deposits exist in many sections of the state. Commercial development, however, largely is confined within the region just east of the front range of the Rockies. This commercial clay includes brick clay, fire clay and pottery clay. Existence of these deposits has been instrumental in developing industries manufacturing brick, pottery, sewer pipe, terra cotta and refractories. Much of the clay is of such high quality that it is contributing to an expanding Colorado industry in scientific and industrial porcelains and thermo porcelain products. The 1953 total output of clays in the state was 778,000 tons--33 per cent over 1952. Of this total, fire clay production amounted to 365,192 tons, a 21 per cent increase over 1952; clays used in the manufacture of brick, tile, cement and other products represented 411,439 tons, an increase of 44 per cent over 1952.

Chaffee County led the state's feldspar production in 1953, with a 14 per cent increase over the previous year. Other producing counties in order of output for 1953 are Jefferson, Teller, Fremont, Clear Creek and El Paso. Grinding mills are operated at Salida and Denver.

Limestone and shale production in Colorado is quite extensive. These two minerals are produced for cement manufacturing in Larimer County at Boettcher and in Fremont County at Portland. Two plants of the Ideal Cement Company located at those communities have a capacity of some three million barrels of cement annually. A huge limestone quarry is operated at Monarch by the Colorado Fuel & Iron Company, and other extensive operations are carried on by beet sugar manufacturers and private quarrymen. Combined shipments of crushed limestone to sugar factories and the steel mill at Pueblo increased in

1953 and comprised 70 per cent of the state total. Deposits of dolomite, travertine and crushed basalt in the state are also quite extensive. Crushed stone output in Colorado (except limestone for cement) was valued at \$1,697,109 in 1953. Sand and gravel excavating throughout the state in 1953 was valued at \$8,609,151.

Perlite, a volcanic glass, is found in many Colorado localities, though principal production has been in Custer County. Perlite is being used as a lightweight aggregate plaster and concrete and for thermal insulation. Fastest expanding market at the present time seems to be for plaster aggregate. Accurate production figures are not currently available, but during 1953 there was a substantial increase over the previous year.

Many deposits of gypsum, a mineral used in cement and plaster manufacturing, are found in the state. Some gypsum of alabaster grade is also being mined for the manufacture of novelties. Mica is another mineral found and produced in Colorado, coming mainly from Fremont, El Paso, Jefferson and Teller Counties.

With the increasing importance of non-metallics in industry, and particularly in the construction field, Colorado's resources provide opportunity for intensive and profitable development.



## PETROLEUM

Shortly before the outbreak of World War II, the nation's major oil companies began exploration and development work in many new fields to replenish lagging oil reserves. One of these successfully exploited fields, and presently Colorado's largest producing field, is the great Rangely area in northwestern part of the state. This area produces 66,323 barrels per day. Second largest in production is Adena, in the Fort Morgan area, with 17,000 barrels per day. Wilson Creek in Rio Blanco County is third, with 7,252 barrels. Little Beaver Field in the Fort Morgan area has a 5,695 barrel-a-day-output.

Big Beaver Field, located south and east of Little Beaver, is the newest field to come into production on which records are available, with a production of 2,353 barrels per day.

The following table shows Colorado's increasing petroleum production since 1940:

Year	Output (barrels)
1940	1,701,544
1945	5,030,663
1948	17,891,235
1950	23,353,000
1951	27,558,000
1952	30,491,642
1953	36,678,906
1954	45,297,000

Production is continuing on an increased basis, and further drilling and exploration being undertaken in widely-separated areas of the state. One of the latest explorations, which geologists say has the potential of becoming the richest oil pool in the country, is located in the Denver-Morrison area, just a few miles west of the Mile-High City.

Considerable activity is also taking place in the San Juan Basin in southwestern Colorado, especially around Durango and neighboring cities. Tempo of development is increasing with proving of vast quantities of natural gas and extensive oil pools.

Colorado now ranks ninth in crude oil production in the United States. The current total state crude oil reserve estimate, is 319,254,000 barrels.



## OIL SHALE

One of the most significant developments in the petroleum industry is the experimental work in refining Colorado's vast oil shale deposits. Beginning in 1944, as a war essential, the U. S. Bureau of Mines established a pilot plant at Rifle, Colorado, for research in finding new and less expensive methods of extracting oil from oil shale. The work of this experimental station, originally planned to have been completed in 1954, was extended into 1955.

Private industry is preparing to carry on the operation in mining of shale and development of refining processes. This is evident by the fact that the Union Oil Company has acquired some fifty thousand acres of land adjoining the government experiment station, and has proposed the building of a five to seven-million-dollar plant. The Dow Chemical Company, in its long-range program of acquiring reserves of raw materials, has acquired 7600 acres of shale land in Grand Valley for the extraction of petrochemicals.

One of the early experiments conducted by the Rifle station was the surfacing of ten blocks of the city's streets to test the suitability of the new material as asphalt. Participating in another experiment, the Denver & Rio Grande Western Railroad ran a Diesel engine with shale fuel for a period of six weeks, and reported good results.

An idea of the importance of the development of commercially feasible processes for refining oil from shale is disclosed by the fact that an estimated 270 billion barrels of oil are contained in Colorado's shale. The principal shale areas of the state--comprising 2592 square miles--are found in Garfield, Mesa and Rio Blanco Counties, and are said to have the greatest concentration of potential energy to be found anywhere in the world.

Experimentation now has developed processes which make possible production of gasoline, lubrication oils, diesel fuel and by-products at a cost approaching a basis competitive with that of liquid petroleum. Colorado has the reserves to produce billions of barrels of high-quality liquid fuels, as well as large quantities of ammonia, sulphur, coke and fuel gas--sufficient, in fact, to make our nation independent from outside sources for fuel. Indications are that operations on a commercial basis shortly will be possible.





## COAL

Coal--a greater bituminous reserve than in any other state of the nation--adds a current wealth and a potential industrial bulwark to Colorado. In line with present day revaluation of America's natural resources and the amazing strides toward complete utilization of these resources, coal has taken on a "new look" in the eyes of industry. The state ranks first in bituminous reserves, third in sub-bituminous reserves and third in anthracite coal.

Colorado's current production largely is used for domestic fuel, for electric power generation and for making of coke in the giant Colorado Fuel and Iron Company's Pueblo mills. Production reached a peak in 1918 when 12,658,000 tons of coal were mined. The 1954 output was under 4,000,000 tons, but Colorado's coal industry has reacted with vigor to the modernization which has become the by-word of today's economy. Modern methods are making the extraction of coal a process which can meet the competition of price and convenience offered by coal's sister fuels.

Not only have the methods been improved at the old sources of supply, but as new sources are uncovered, mass production methods can be initiated which make the operation an efficient and continuous one from extraction to electricity. Colorado offers many choice sites for such an operation, with an added advantage of government and industrial cooperation.

The wide occurrence of coal fields--in 34 distinct sections of the state--is significant for many reasons. Primarily, it means short hauls for industrial use. Again, for production of electric energy in steam plants, it assures continued supply of low-cost fuels. Further, in the nation's widespread dispersion program, industry has coal supplies in Colorado adjacent to other needed raw materials, transportation and labor pools.

New processes have been developed to utilize the lower grades of coal for fuel and other purposes, and with these processes in operation, mining costs can be cut to the bone by the large scale operation method and the coal itself is utilized to its highest thermal output. Typical of these new processes is the low temperature distillation method called the Parry Process, developed by Dr. V. F. Parry at the Colorado School of Mines, Golden, Colorado, and the Bureau of Mines Section at the Denver Federal Center.

From the process used to convert low-cost coals to heat, there is a quantity extraction of chemical tars and other by-products such as naphthalene, benzol, pyridine and sulphates. These by-products are the foundation for a whole new chemical industry in Colorado, and

makes the vast coal deposits worthy of searching study and analysis.

Under the most intensive mining and utilization program, the coal of Colorado can satisfy demands of industrial and domestic consumption for centuries without depletion.

Detailed information about Colorado's coal industry may be obtained from the State Mine Inspector, Division of Coal Mines, Denver, Colorado.

## L U M B E R

Colorado stands seventh among states in total land area and ninth in extend of forests of all classes, with nearly twenty million acres of forest land. Of this figure, about fifteen million acres consist of commercial forests. Approximately one-third of the state is forested, with the greatest commercial possibilities concentrated on the Western Slope of the Rockies.

The following table shows the breakdown of ownership of forested land.

	All Ownership on Forested Land	Commercial Forests	Non- Commercial
Federal .....	14,665,000	5,924,000	8,741,000
State Owned .....	388,000	144,000	244,000
County & Municipal .....	60,000	8,000	52,000
Private .....	4,789,000	1,799,000	2,990,000
Total Acres	19,902,000	7,875,000	12,027,000

Saw timber stands in the commonwealth are estimated at more than twenty-seven billion board feet, twenty-three billion of which are in the national forests. During recent years, lumber production in the state has ranged between 110 million and 120 million board feet annually. This output is most heavily concentrated in the San Juan Basin area of southwestern Colorado, the Middle Park area west of Denver and the Gunnison-Montrose region. Products include sawed lumber, railroad ties, heavy mine timbers, telephone poles and cordwood.

Consumption of timber products in the state ranges from 315 million to 325 million board feet annually. This consumption figure greatly exceeds production, placing the state on an import basis for this commodity. Local lumber business could be built up substantially, however, through improved manufacture and better promotion for lodgepole pine and Englemann Spruce. They are excellent for such business uses as specialties, pulp, Christmas trees, mine props, boxes and crates, logs for cabin building, and knotty lodgepole for interior finishing.

Colorado forests offer not only the source for supplying a greater portion of self-consumed lumber, but a source for by-products

of many kinds. Notably, portions of the state's forests produce a fibre of unusually tough characteristics, valuable in making of kraft-type paper and boxes.

The following table gives a breakdown of Colorado timber by species

Species	Estimated Millions of Board Feet
All Hardwoods .....	915.5
All Softwoods .....	26,742.0
Ponderosa Pine .....	3,735.4
Englemann Spruce .....	13,778.0
Lodgepole Pine .....	5,487.7
Douglas Fir .....	1,473.4
True Firs .....	2,165.8
Others .....	101.7

Development of additional production for lumber, wood products and by-products holds a broadening promise for Colorado. By virtue of location, such developments will occur in areas adequately served with power and transportation yet virtually untouched industrially at this time.



## AGRICULTURE AND LIVESTOCK

Agriculture and livestock form the backbone of Colorado's stable economy. Colorado's farm and livestock income provides major purchasing power. Almost one-fourth of the state's manufacturing firms are food processors. Colorado's rural wealth is drawn from the fertile plains area in the eastern portion of the state and the rich mountain valleys and mesas of the western and southern areas.

U.S. Census Bureau statistics for 1950 disclose the sound and prosperous condition of Colorado's farm and ranch population. Based on Census data, the U.S. Department of Agriculture placed an estimated worth on all Colorado farms and ranches of \$1,212,000,000. This figure was \$4 million more than their 1945 value.

The current 10-year average value of the products of Colorado's farms and ranches is \$461,000,000. More than half of this amount was from sales of livestock and livestock products.

Only about sixteen per cent of the state's population is engaged in farming and ranching. Average acreage of the 45,578 farms and ranches is 832, with 37,953,099 acres in agricultural use. Despite the fact that one-fourth of Colorado's farms and ranches are operated only part time and are mainly for living purposes, the average gross sales in 1953 were \$10,597.

Principal crops grown are wheat, sugar beets, dry beans, potatoes, hay and alfalfa, small grains, corn, lettuce, celery and other truck crops; peaches, apples and miscellaneous items. In the more arid plains regions and in the mountain valleys, huge herds of cattle and sheep graze on fertile ranges.



## TRANSPORTATION

Direct communication by rail, by highway and by air ties Colorado to the nation for movement of freight, business transportation, general pleasure and business travel. With Denver as its major transportation center, Colorado and its sister Midwest and Mountain States link the nation North and South, East and West with modern, alert, completely adequate transportation for present and for growing needs.

Reference to the accompanying map immediately discloses the complete net work of all means of transportation within the state, to the Pacific Coast, to the Midwest and the East, to Canadian, Mexican and Southern United States points. Freight and passengers move quickly and economically to and from Colorado.

### RAILROADS

Three transcontinental rail systems move through Colorado for east and west service. Union Pacific serves the Midwest, Kansas City and Chicago on the east; Cheyenne, Boise and Salt Lake City; Los Angeles, Portland, Seattle and other Pacific Coast points; San Francisco via Southern Pacific and Western Pacific from Ogden and Salt Lake City.

Atchison, Topeka and Santa Fe, serving Chicago, and the Southwest to Los Angeles, connects through Colorado at La Junta and Trinidad, and to Pueblo, Colorado Springs and Denver through La Junta.

The third trunk system is a combination of four railroads. Three of these feed Colorado eastward. They are the Chicago, Burlington and Quincy, and the Chicago, Rock Island and Pacific to the Midwest and Chicago; the Missouri Pacific through the Pueblo gateway to Kansas City, St. Louis and to the southeast. These combine with the Denver and Rio Grande Western through central Colorado to provide a through route to San Francisco via Southern Pacific and Western Pacific at Ogden and Salt Lake City. Connections to Los Angeles are made at Salt Lake City.

High-speed, heavy-duty steel highways; dieselized freight and passenger operation; modern, efficient yard facilities; centralized traffic control and automatic electric block signals are up-to-date features of railroads serving Colorado and the Rocky Mountain Empire. Low operating ratios are indicative of these carriers' progressive management, and their alert operation in the territory they serve.

Colorado also possesses a strategically-situated Class I railroad

for North-to-South freight and passenger transportation. This is the Colorado and Southern Railway Company, a subsidiary of the Chicago, Burlington and Quincy, which extends from the oil- and livestock-rich Wyoming country through the heart of Texas with its connecting line, the Fort Worth and Denver Railway Company. This line connects Wichita Falls, Fort Worth, Dallas, Amarillo, Houston and San Antonio and is becoming an increasingly important rail service in this expanding area. It is the only main North-South carrier between the Missouri River and the Pacific Coast.

That this capacity continues to carry a major portion of the greatly accelerated freight flow in the expanding western economy is graphically proved in Interstate Commerce Commission figures on tonnage carried in 1940 and in 1950. The 1940 loadings, originating and terminating, totalled just over 15,000,000 net tons. In 1950, these same roads showed in excess of 23,000,000 tons.

The complete table follows:

Nature of Products	1940		Net Tons 1950	
	Originated	Terminated	Originated	Terminated
Agriculture	2,104,727	1,995,912	3,059,870	2,585,786
Animals and Products	344,620	203,573	401,119	229,948
Mines	4,263,636	3,166,578	4,732,876	5,750,599
Forests	25,909	236,816	162,975	517,631
Manufactures & Misc.	1,144,315	1,705,515	2,945,882	3,000,662
Total All Commodities	7,883,207	7,308,394	11,302,722	12,084,626

During World War II and the Korean conflict, these railroads strikingly demonstrated not only adequate capacity for swollen freight movement, but operating performance that proved conclusively the ability of these roads to move both normal and emergency freight.

In addition to the seven Class I railroads operating in the state, Colorado has a complement of local-service railroads serving, largely, agricultural and mining areas for freight haulage. There are, altogether, 16 lines within the state with a main-track operation of 4,211 miles.



## AIR TRANSPORT

Long a railway and highway transportation hub, Colorado has reached the point where it is equally well served by commercial air lines--a necessity in this complex age when speed is a vital factor.

There are 119 civil airports now in operation in Colorado, ranging in size from huge commercial airports such as Stapleton Airfield in Denver to local airports in smaller communities. It is notable, too, that many private airports exist on ranches and industrial properties. Private flying has increased greatly in the state during the past few years. To show the tremendous growth in this field, in 1942, only 226 aircraft were certified in Colorado, whereas, by 1953, the figure had increased to 1,469. As of 1954, there were 9,607 certified pilots in the state--5,834 were private pilots, 2,627 commercial pilots, and 355 airline transport pilots.

In addition to flying for pleasure, the small plane has been adapted for ranching and farming operations and aerial photography. Industries and other businesses also have found the light plane useful in many phases of their activities.

Colorado's licensed commercial air lines not only serve every industrially strategic point within the state, but connect with every major East-West transcontinental air line.

United Air Lines, through Denver, operates to major Pacific Coast, Central and East Coast cities and extends between all key cities. United also maintains scheduled Cargo-liner freight service for the Colorado area through Denver.

Continental Air Lines, operating base in Denver, purchased in 1954 the routes and assets of Pioneer Air Lines of Dallas. This combination now joins twelve major metropolitan areas of Continental Air Lines and the Dallas-Fort Worth region, providing highly integrated air services to these areas.

Frontier Airlines, a local service operation serving the 7-state area of Arizona, New Mexico, Utah, Wyoming, Montana, Colorado and Texas, connects with all four major East-West air lines. These are Northwest at Billings, Montana; Trans-World Airline, Inc., at Phoenix, Arizona; American Airlines at Phoenix and Tucson, Arizona; United Air Lines at Denver, Grand Junction, Colorado and Salt Lake City, Utah.

The chart on the following page indicates principal air service points for the lines operating through Colorado. In addition to direct points, Braniff International Airways connects with American Airlines at Dallas, Texas, and Tulsa, Oklahoma. Continental Air Lines connects with American Airlines at Tulsa, Oklahoma, and at El Paso, Texas.

The state is served by five commercial air lines handling passengers, mail, express and cargo. These carriers include:

Company	Colorado Cities Served	Principal Out-of-State Points Served
Braniff International Airways	Denver, Colorado Springs	Dallas, Ft. Worth, Houston, San Antonio, Texas; Tulsa, Oklahoma City, Okla.; Memphis, Tenn.; Havana, Cuba; Rio de Janeiro, Buenos Aires and principal Central and South American points.
Continental Air Lines, Inc.	Denver, La Junta, Trinidad, Colorado Springs, Pueblo	Kansas City, Hutchinson, Kans.; St. Louis, Mo.; Albuquerque, N. Mex.; Tulsa, Oklahoma City, Okla.; El Paso, Houston, San Antonio, Dallas, Ft. Worth, Austin, Texas.
United Air Lines	Denver, Grand Junction	Omaha, Neb.; Chicago, Ill.; Cleveland, Ohio; Detroit, Mich.; Philadelphia, Pa.; New York, N. Y.; Boston, Mass.; Washington, D. C.; Salt Lake City, Utah, the Pacific Northwest, San Francisco, Oakland, Los Angeles, San Diego, Calif.; Hawaii and the Pacific.
Western Air Lines	Denver	Cheyenne, Casper, Wyo.; Great Falls, Billings, Mont.; Dakota points--Rapid City and Pierre; Twin Cities, Rochester, Minn.; Edmonton, Alberta, Canada.
Frontier Air Lines	Local service line serving Denver, Pueblo, Monte Vista, Alamosa, Durango, Cortez, Gunnison, Montrose, Grand Junction	Cheyenne, Casper, Wyo.; Salt Lake City, Utah; Albuquerque, Farmington, New Mex.; Phoenix, Flagstaff, Tucson, Arizona; Billings, Mont.; El Paso, Texas.

## MOTOR CARRIERS

Once again, Colorado's fortunate position in relation to markets and supplies is demonstrated in its well-planned highway system, providing rapid over-the-road freight haulage. Colorado has 4045 miles of federal aid primary roads, 3,804 miles of federal aid secondary roads, 53 miles of other state highways, and 65,707 miles of county and city roads and streets. Colorado's 73,609 miles of highways adequately support both the passenger-car traffic and an ever-increasing volume of over-the-road shipping. It is interesting to note that the total mileage of the state's highway system is equal to approximately two and one-half times the distance from New York City to San Francisco by highway--or, it is equal to one-third the distance around the world at the equator.

Some 615 intrastate common carrier trucking firms and 846 interstate carriers give Colorado and its industries both an intensive local motor carrier network and transcontinental freight outlets and connections in all directions. Here, as with the railroads, the great distances between major cities permits added mileage per highway hour.

The larger trucking firms include such well-known carriers as Pacific Intermountain Express, Denver-Amarillo Express, Denver-Chicago Trucking Company, Weicker Transfer and Storage, Rio Grande Motorway, Riss and Company, Burlington Truck Lines, Salt Creek Express, Gallagher Transfer & Storage, Ringsby Truck Lines, Santa Fe Trail Transportation, Illinois-California Express, and Watson Bros. Van Lines Company. This is but a partial list.

In addition, there are many specialized carrier services hauling livestock, perishables, heavy machinery and petroleum products. Some 260 Class A carriers and 780 Class B carriers operate in the area. The trucking industry also is vital to mines, timber regions and ranches located in the mountainous area of Colorado where other means of transportation are less feasible.

The state is also served by several thousand miles of scheduled bus lines, including such large operations as Greyhound Lines and the National Trailways Bus System. This network of bus systems--national, regional and interurban--complete the passenger service system for Colorado's growing population. In addition, there are many local carriers and feeders operating efficiently and safely within Colorado.





## CURRENT INDUSTRIAL POSITION

### MANUFACTURING

The latest statistics available as to a detailed analysis of the nature, location and scope of manufacturing firms in Colorado are those prepared by the U.S. Department of Commerce in the Business Census of 1947. Figures for a new business census are being taken, and will be available in the latter part of 1955. (Statistics on over-all manufacturing in Colorado are given in the section on the GROWTH OF INDUSTRIAL COLORADO.)

The following table shows the breakdown from the 1947 Business Census:

Type	No. Plants	Em- ployees	Salaries & Wages	Value Added By Manufacture
Food Products .....	442	15,295	\$ 39,195,000	\$ 92,675,000
Textile Products .....	4	116	199,000	363,000
Apparel, etc. ....	45	1,632	3,138,000	5,234,000
Lumber & Products ...	188	2,282	5,020,000	8,106,000
Furniture, etc. ....	40	672	1,486,000	2,655,000
Printing, Publishing...	293	4,596	11,503,000	22,386,000
Chemicals .....	62	1,275	3,792,000	8,271,000
Petroleum Products ...	14	791	2,844,000	9,607,000
Leather Products ....	19	1,180	2,894,000	4,370,000
Stone, Clay, Glass Prod.	108	2,430	5,796,000	11,966,000
Primary Metals .....	47	7,880	24,001,000	37,395,000
Metal Fabricators ....	83	2,326	6,360,000	11,261,000
Machinery .....	101	4,504	12,645,000	22,550,000
Transp. Equipment ...	16	663	1,985,000	3,100,000
Instruments .....	18	360	1,013,000	1,737,000
Other Major Ind. ....	29	6,265	18,408,000	38,894,000
Miscellaneous .....	93	1,804	3,928,000	6,204,000
TOTAL .....	1,602	54,071	\$144,207,000	\$286,774,000

This manufacturing economy has undergone further expansion, with nearly 1,800 plants now operating within the state. Food processing and primary metals remain the two major industrial classifications for 1954.

The great bulk of Colorado's manufacturing is concentrated in the bank of counties resting on the east slope of the Rocky Mountains, extending from the vicinity of Pueblo to the Wyoming border. It was here the first concentration of population developed, and the advantages of transportation and accessibility to markets to the east, north and south have continued to contribute to this industrial growth. Establishment of the Colorado Fuel & Iron Corporation at Pueblo, where steel for rails first was rolled in 1888, is the basis for the solid industrial pattern of that area.

Lack of manufacturing and industry in many counties is not indicative of a backward economy or a lack of opportunity for solid industrial installations and development. Colorado's Western Slope holds myriad advantages for industries requiring non-ferrous or non-metallic mineral resources; tremendous possibilities for the chemical industries, and for lumber, pulp and allied basic materials and finished products. Transportation advances, in recent years particularly, place this virtually untapped industrial storehouse close to the nation's markets.

## INDUSTRIAL SITES

Under the urgency of decentralization--both for competitive economic purposes and for national defense reasons--industry is faced with the problem of choosing plant locations with great care. Even those plants created for defense or emergency production must possess a potential economic justification for conversion to production of goods for normal economic periods.

With this realization, the State of Colorado makes no attempt here to suggest any single location, or group of locations, for consideration. Rather, the factual material presented is offered to provide basic information about the many factors with which a provident mother nature and a productive population have endowed this state.

Colorado's industrial belt now largely is concentrated on the Eastern Slope of the Rocky Mountains, extending approximately 175 miles from north to south, and 20 miles from east to west. Dependent entirely on specific needs and requirements, raw materials, nature of labor supply, transportation, utilities, soil and water, practically every populated area of Colorado offers industrial sites meeting practically every demand for primary or dispersion operation.

Complete information and facts about locating or establishing industries in various sections of Colorado may be obtained from the Bureau of Business Research, University of Colorado, Boulder, Colorado. Traffic and industrial departments of railroads and trucking companies in Colorado provide another source of inquiry.





## TAXES

The taxes herein discussed are those Colorado levies of significance to industry.

### State Income Taxes

The Colorado State income tax is levied upon the net income of all residents, of all non-residents derived from sources within the State and of corporations and fiduciaries. Basic tax rates on individual incomes start at one per cent on net income (after exemptions) under \$1,000 and graduate to ten per cent on net taxable income over \$11,000. There is a surtax of two per cent on income of individuals derived from interest, dividends and royalties.

The basic corporation net income tax rate is five per cent. In the cases of both individuals and corporations, the full amounts of federal income and excess profits taxes are deductions from net income which results in an average Colorado income tax bill actually comparable with that of other states which have much lower rates. Colorado levies no excess profits tax on businesses or corporations. In 1954, the Colorado Withholding Tax law became effective, with a tax rate of four per cent of the amount required to be withheld under federal law.

Colorado's Legislature, in 1951, had general fund surpluses as a result of governmental economies, and immediately granted a blanket 20 per cent reduction in all income taxes. In effect, this action reduced the actual rates to 4 per cent for corporations, and 0.8 to 8 per cent for individuals. To date, this law is still in effect.

### Workmen's Compensation and Unemployment Obligations

Employers of more than four persons are required to carry insurance for protection of employees coming under the Act. An Occupational Disease Law also applies to employers subject to the Compensation Act. Information on specific industries or problems may be obtained from the State Industrial Commission.

Weekly unemployment benefits range from \$7.00 to a maximum of \$28.00 for 20 weeks. The program is financed by taxes levied upon employers with eight or more employees. The base rate for the unemployment compensation tax in Colorado is 2.7 per cent of the employee wage up to \$3,000. However, employers who have good employment records, with a minimum of discharges and layoffs,

can reduce or eliminate the sum they have to pay. The average tax rate is now about .37 of one per cent, and 57.7 per cent of all Colorado employers have established merit ratings so good that they pay no state unemployment tax at all.

#### Miscellaneous Taxes Applicable to Industry

Principal source of revenue for highway purposes is a six cent tax per gallon, levied by the state, on motor fuel. Another source of highway revenue is the State Carrier Tax levied on commercial trucks and buses.

Colorado Sales Tax is levied on retail purchases at the rate of two per cent. Colorado Use Tax is levied at the same rate on purchases outside the state for use and consumption within Colorado. This tax applies only to tangible personal property.

The state mill levy on real and personal property for all state purposes is 2.7 mills. This is in addition to local and county levies which vary under local conditions.

Domestic Colorado corporations pay a state tax at time of incorporation of \$27.50 for the first \$50,000 of capitalization and 22 cents for each additional \$1,000 capitalization. The fee for foreign corporations is \$45.00 for the first \$50,000 and 30 cents for each additional \$1,000.

## COLORADO LIVING

The magic ingredient of life in Colorado is its climate ... temperate, delightful, zestful. The statistical report on temperatures, humidity, rainfall and other data recorded earlier in this booklet can tell only a part of the delightful enjoyment of living in Colorado the year around.

Only when one breathes Colorado's clear, pure air ... gazes into the unbelievable blue of Colorado's skies ... listens to the purling of clear mountain streams cascading through virgin forest slopes ... sweeps his eye over the lush and verdant plains--only then is it possible to realize the contentment and joy this state offers its growing population.

These are qualities which even the heaviest industrialization cannot dim. For, even in the most congested areas, the tranquility of mountain retreat, of family pleasures at recreation of one's choosing are only a matter of short miles and moments away. The Rocky Mountains crown the state with a glory of beauty and recreation unmatched in America and doubtfully equalled anywhere in the world.

It is this combined God-given heritage of perfect climate and surrounding delights--both of nature and man-made--that breathes content for those living and working here. This is the quality that keeps the working man and his family happy, productive ... a primary reason for greater executive and employee efficiency in Colorado.

Every year nearly four million persons from all over the world come to Colorado to enjoy this vacation paradise. Their dollar expenditures are approximately \$300 million annually--making this the state's third largest industry. For Coloradoans, this all-year vacationland is home!

As shown in an earlier table, Colorado educationally is far above the national average in school attendance, standing second highest in the U.S. in percentage of school enrollment per 1,000 population. In both facilities and progressive educational methods, the state is equipped for its present classroom load and for expansion in student enrollment.

Colorado has 1,584 public schools, of which number 76 are kindergarten; 1,136, elementary; 90 junior high; 264, senior high; 5, junior college; and 13, evening or vocational, including Denver's famous Opportunity School. In addition, there are 45 Catholic parochial schools in the state, and 13 senior colleges and universities, six of which are privately operated and seven, state supported.

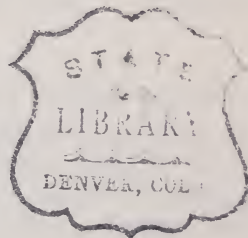


The following table shows the enrollment breakdown in Colorado's schools:

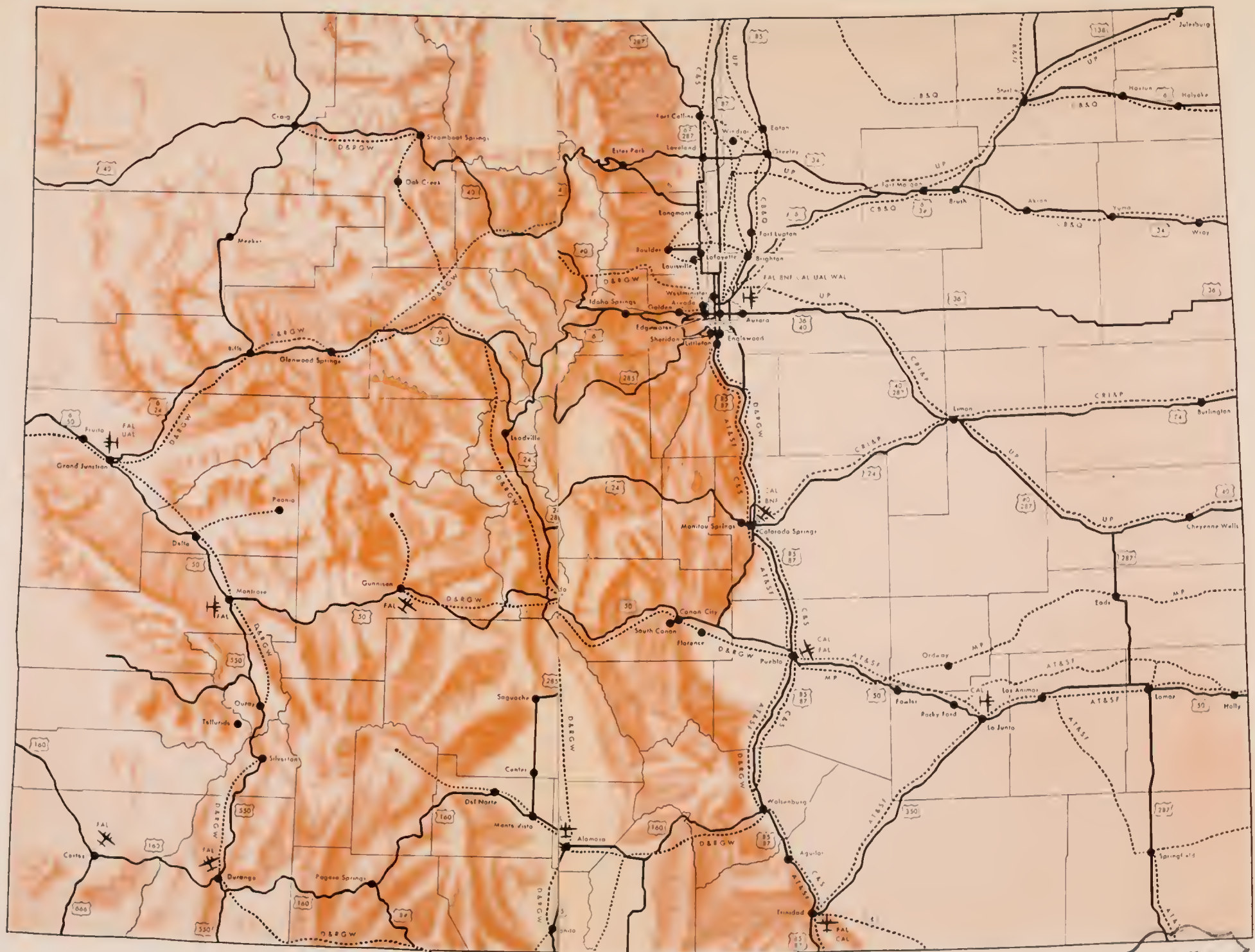
<u>School Classification</u>	<u>Student Enrollment</u>
From kindergarten through Junior Colleges	253,289
All Catholic schools	26,775
State-supported colleges and universities	17,775
Privately-operated   "   "   "	8,346
Extension or vocational schools	<u>31,127</u>
Total enrollment - all schools	337,312

Besides the schools included in the table, there are a number of business and trade schools throughout the state.

Virtually every religious denomination and sect is represented in Colorado. Church attendance is extremely high, and the influence of the various churches on their membership contributes markedly for the state's general economic and social stability.







# LEGEND

Colorado Cities shown are Incorporated Cities  
of 1,000 population or over—Official 1950 U.S. Census

Primary Federal Aid Highways

Class 1 Railroads

Scheduled Air Line Ports

## CLASS 1 RAILROADS

A.T. & S.F. Santa Fe  
C.B. & Q. Burlington  
C. & S. Colorado & Southern

C.R.I. & P. Rock Island  
D. & R.G.W. Rio Grande  
M.P. Missouri Pacific  
U.P. Union Pacific

## AIRLINES

BNF. Braniff  
CAL. Continental  
FAL. Frontier  
UAL. United  
WAL. Western













